

In the Claims

This listing of claims will replace all prior versions and listings of claims in the application:

1        1.    (Currently Amended) A method of providing a low cost  
2 quantized nonlinear continuous coefficient curve scaler for  
3 converting consistently spaced sampled input data into consistently  
4 spaced resultant scaled data comprising the steps of:  
5        providing a quantized coefficient table representing an  
6 approximation of the nonlinear continuous curve, said table  
7 including a plurality of sets of n coefficients, each set of n  
8 coefficients summing to a normalization value of an integral power  
9 of 2, and each coefficient of each set of n coefficients being an  
10 integral factor of said normalization value;  
11        applying said table in hardware to successively locate the  
12 sets of n coefficients in the table; and  
13        applying the located set of n coefficients to n corresponding  
14 sampled input data via a scaling pipeline by summing the product of  
15 each of said n coefficients and said corresponding sampled input  
16 data to get resultant scaled data.

2 to 5.    (Canceled)

1        6.    (Currently Amended) The method of Claim 5 1 wherein said  
2 nonlinear curve is  $\sin(x)/x$ .

7 to 9.    (Canceled)

1        10.   (Currently Amended) A quantized nonlinear curve scaler  
2 comprising:  
3        a series of latches for latching a stream of source data  
4 wherein the content of the latches is the source data elements;

5 a quantized coefficient table storing an approximation of the  
6 nonlinear continuous curve, said quantized coefficient table  
7 including a plurality of sets of n coefficients, each set of n  
8 coefficients summing to a normalization value of an integral power  
9 of 2, and each coefficient of each set of n coefficients being an  
10 integral factor of said normalization value;

11 a shift and add multiplier comprising a first adder and a  
12 shifter for shifting and adding contents of each latch by  
13 corresponding coefficients provided by said quantized coefficient  
14 table to produce coefficient products of the source data elements;  
15 and

16 a second adder for summing coefficient products from the  
17 series of latches to provide the resultant data value.

11 to 14. (Canceled)

1 15. (New) The quantized nonlinear curve scaler of Claim 10  
2 wherein:  
3 said nonlinear curve is  $\sin(x)/x$ .